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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/643,981	08/23/2000	Henry H. Cheng	723-845	9922

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NIXON & VANDERHYE, P.C.
901 NORTH GLEBE ROAD, 11TH FLOOR
ARLINGTON, VA 22203

EXAMINER	
LAO, LUN S	

ART UNIT	PAPER NUMBER
2615	

MAIL DATE	DELIVERY MODE
07/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/643,981	CHENG, HENRY H.	
	Examiner	Art Unit	
	Lun-See Lao	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 May 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. 1. This action is response to the amendment filed on 05-10-2007. Claims 1, 5, 14 and 23 have been amended. Claims 1-29 are pending.

Continued Examination Under 37 CFR 1.114

2. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 05-10-2007 has been entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-13 and 23-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Williams (US PAT. 5,896,459) in view of applicant's prior admitted art (APA).

Consider claims 1 and 5 Williams teaches a sound effects processing system comprising:

a sound effects processor (see fig.3, (100)); and

a mixer comprising (see fig.3, (100)):

a mixer buffer (see fig.3, (100)) for storing sample values for three or more sound channels (see fig.3, (such as ch1,ch2...ch n-1, ch n), each sound channel including a main sound component (the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the dry mix of fig.3 can be considered as a main sound component) and one or more corresponding auxiliary sound components (the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the effects send 116 in fig. 3 of Williams) can be considered an auxiliary component and see col. 4 line 40-col.5 line 19) and (see fig.4, (146,148,150,152));

send paths (see fig.3, (116) and fig.4, (116)) for sending the auxiliary sound components for each sound channel to the sound effects processor (30 in fig. 2); and

return paths (see fig.3,118, and fig. 4 (118)) from the sound effects processor for adding (see fig.4, signal from 194 (top) with the signal from (bottom) 192 in the area marked by a dot) the effects-processed auxiliary sound components of the N channels to the main sound component (see col. 5 line 20-col.6 line 67); but Williams does not teach return paths from the sound processor for separately adding the effects-processed auxiliary sound components for each of the three or more sound channels to the respective corresponding main sound component.

However, Applicant's APA teaches return paths from the sound processor (see fig.11 B) for separately adding the effects-processed auxiliary sound components for each of the three or more sound channels to the respective corresponding main sound component(L, R and see specification page 3 lines 12-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of applicant's prior art into Williams so that more than one channel with special effects added could have been produced.

As to claim 23, there is a method claim responding to system of claim 1. See previous system claim 1 rejection.

Consider claims 2, 4 and 6, 8, Williams teaches the system of the mixer further comprises:

mixer volume controls for independently controlling the volume of the main and auxiliary sound components of each sound channel supplied to the mixer buffer (see col.5 line 20-col.6 line 67); and the system of the sample values for three or more sound channels are accumulated for a plurality of voices (see figs. 3-4 and col.4 line 40-col.5 line 20).

As to claims 24 and 26, these are the method claims of claims 2 and 4, respectively. Thus note claims 2 and 4, respectively, for rejections.

Consider claims 3 and 7, Williams does not clearly teach the system of the mixer further comprises a surround encoder, and the mixer buffer comprises left, right and surround sound channels and the surround encoder encodes information on the

surround sound channel, including the effects-processed auxiliary sound components added to the surround channel, onto the left and right sound channels.

However, Applicant's APA teaches the system of the mixer further comprises a surround encoder (see fig.11b, (surround encoding)), and the mixer buffer comprises left, right and surround sound channels and the surround encoder encodes information on the surround sound channel, including the effects-processed (1004) auxiliary sound components added to the surround channel, onto the left and right sound channels (see specification page 3 lines 12-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of applicant's prior art into Williams so that more than one channel with special effects added could have been produced.

As to claim 25, there is a method claim responding to system of claim 3. See previous system claim 3 rejection.

Consider claims 9-11, Williams teaches the system of the sound effects processor provides reverb to the auxiliary sound components(the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the effects send 116 in fig. 3 of Williams) can be consider an auxiliary component of each channel) for each sound channel (see col.4 lines 34-57); and the system of the sound effects processor 2 provides delay to the auxiliary sound components for each sound channel (see col.4 lines 34-57); and the system of the sound effects processor provides chorus to the auxiliary sound components for each sound channel (it may provide chorus, because etcetera and see col.4 lines 40-57).

Method claims 27-29 correspond to apparatus claims of claims 9-11, respectively. Thus note the rejections for claims 9-11, Williams meets all the claimed limitations.

Consider claims 12-13, Williams teaches the system of the sound effects processor processes the auxiliary sound components (the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the effects send 116 in fig. 3 of Williams) can be consider an auxiliary component of each channel) for each sound channel using the same sound effects parameters (depends on fig.4, 116, 118 (effects) and see col.6 line 55-67); and the system of the sound effects processor processes the auxiliary sound components for each sound channel using different sound effects parameters (depends on fig.4, 116, 118 (effects) and see col.6 line 55-67).

5. Claims 14-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaneoka (US PAT 4,783,812) in view of Williams (US PAT 5,896,459) and Applicant's admitted prior art (APA).

Consider claim 14, Kaneoka teaches a video game system comprising:

a video game machine (see fig.1, 14) for executing a video game program; and

a hand-held player controller (14) connected to said video game machine (14) and operable by a player to generate video game control signals for the video game program (see col. 4 line 23-col. 5 line 25),

wherein said video game machine includes an audio system for generating

sound signals for driving speakers, said audio system comprising (see col.3 line 45-col.4 line 64); but Kaneoka does not teach a sound effects processor; and a mixer comprising:

a mixer buffer for storing sample values for three or more sound channels, each sound channel including a main sound component and one or more auxiliary sound components;

send paths for sending the auxiliary sound components for each sound channel to the sound effects processor; and

return paths from the sound processor for separately adding the effects-processed auxiliary sound components for each of the three or more sound channels to the respective corresponding main sound component.

However, Williams teaches a sound effects processing system comprising:

a sound effects processor (see fig.3, (100)); and

a mixer comprising (see fig.3, (100)):

a mixer buffer (see fig.3, (100)) for storing sample values for three or more sound channels (see fig.3, (such as ch1,ch2...ch n-1, ch n), each sound channel including a main sound component (the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the dry mix of fig.3 can be considered as a main sound component) and one or more auxiliary sound components (the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the effects send 116 in fig. 3 of Williams) can be considered an auxiliary component and see col. 4 line 40-col.5 line 19) and (see fig.4, (146,148,150,152)));

send paths (see fig.3, (116) and fig.4, (116)) for sending the auxiliary sound components for each sound channel to the sound effects processor (30 in fig. 2); and

return paths (see fig.3,118, and fig. 4 (118)) from the sound effects processor for adding (see fig.4, signal from 194 (top) with the signal from (bottom) 192 in the area marked by a dot) the effects-processed auxiliary sound components of the N channels to the main sound component (see col. 5 line 20-col.6 line 67);

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Williams into Kaneka to provide separating dry, effects and main mixes that is compact, easy to operate and efficient to use.

On the other hand, Applicant's APA teaches return paths from the sound processor (see fig.11 B) for separately adding the effects-processed auxiliary sound components for each of the three or more sound channels to the respective corresponding main sound component(L, R and see specification page 3 lines 12-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of applicant's prior art into Kaneka so that more than one channel with special effects added could have been produced.

Consider claim 15 and 17, Williams teaches the system of the mixer further comprises:

mixer volume controls for independently controlling the volume of the main and auxiliary sound components of each sound channel supplied to the mixer buffer (see col.5 line 20-col.6 line 67); and the system of the sample values for three

or more sound channels are accumulated for a plurality of voices (see figs 3-4 and col.4 line 40-col.5 line 20).

Consider claim 16, Kaneoka and Williams do not clearly teach the system of the mixer further comprises a surround encoder, and the mixer buffer comprises left, right and surround sound channels and the surround encoder encodes information on the surround sound channel, including the effects-processed auxiliary sound components added to the surround channel, onto the left and right sound channels.

However, Applicant's APA teaches the system of the mixer further comprises a surround encoder (see fig.11b, (surround encoding)), and the mixer buffer comprises left, right and surround sound channels and the surround encoder encodes information on the surround sound channel, including the effects-processed (1004) auxiliary sound components added to the surround channel, onto the left and right sound channels (see specification page 3 lines 12-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of applicant's prior art into Kaneka so that more than one channel with special effects added could have been produced.

Consider claims 18-20, Williams teaches the system of the sound effects processor provides reverb to the auxiliary sound components for each sound channel (see col.4 lines 34-57); and the system of the sound effects processor 2 provides delay to the auxiliary sound components for each sound channel (see col.4 lines 34-57); and the system of the sound effects processor provides chorus to the auxiliary sound

components for each sound channel (it may provide chorus, because etcetera and see col.4 lines 40-57).

Consider claims 21-22, Williams teaches the system of the sound effects processor processes the auxiliary sound components for each sound channel using the same sound effects parameters (may be, depends on fig.4, mix console and see col.6 line 55-67); and the system of the sound effects processor processes the auxiliary sound components for each sound channel using different sound effects parameters (may be, depends on fig.4, mix console and see col.6 line 55-67).

Response to Arguments

6. Applicant's arguments with respect to claim 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argued that There is simply no disclosure in Williams of a channel having a main component and one or more auxiliary components that are processed as claimed; and Williams further fails to disclose sending the auxiliary sound components of each of a plurality of sound channels to a sound effects processor and then adding these effects-processed auxiliary sound components to corresponding main sound components (see remark page 9, 3rd and last paragraphs).

The examiner disagreed with that. Williams teaches a mixer buffer (see fig.3, (100)) for storing sample values for three or more sound channels (see fig.3, (such as ch1,ch2...ch n-1, ch n), each sound channel including a main sound component (the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the dry mix of

fig.3 can be considered as a main sound component) and one or more auxiliary sound components (the component of each channel (e.g., ch1, ch2, ...ch n-1, ch n) that goes to the effects send 116 in fig. 3 of Williams) can be considered an auxiliary component and see col. 4 line 40-col.5 line 19) and (see fig.4, (146,148,150,152))).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

8. Any response to this action should be mailed to:

Mail Stop ____(explanation, e.g., Amendment or After-final, etc.)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Facsimile responses should be faxed to:
(571) 273-8300

Hand-delivered responses should be brought to:
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (571) 272-7501 The examiner can normally be reached on Monday-Friday from 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian, can be reached on (571) 272-7848.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (571) 272-2600.

Lao,Lun-See L. S.
Patent Examiner
US Patent and Trademark Office
Knox
571-272-7501
Date 07-05-2007

VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600